

# What is the formula/methodology for estimating the number of jobs generated by Tourism?

Economic Activity	Industry Comparison	Total Economic Impact
Tourism Revenues	Hosp & Leisure Industry Jobs & Wages ( <a href="http://www.bls.gov/oco/cg/cg1009.htm">http://www.bls.gov/oco/cg/cg1009.htm</a> )	Job Multipliers (Dir/Indir/Induced) Applied to Visitor Expenditures by Category
Capital Investments	Announcements of \$\$ and Job Creation (following the DOC approach)	Job Multipliers (Dir/Indir/Induced) Applied to Construction by Actual Investment during the Year* <b>OR</b> Treat as an add'l tourism-related economic activity within the TSA model

*\*To do this would require data collection through telephone calls to the individual developers.*

## Industry Comparison

**How can we compare jobs in the Tourism Industry to jobs in other industries?** As far as industry classifications, there is no 'Tourism Industry.' The closest industry classification is the 'Hospitality & Leisure Industry' which includes hotels, restaurants and arts/recreation/entertainment. Since the Hospitality & Leisure Industry classification was implemented within the 'new' government accounting system (NAICS), it has been in the *SC Travel Barometer* (<http://www.scprr.com/files/Research/stwdspr06.htm>) produced quarterly by the SCPRT Research & Policy Development Office.

*Note: The Hospitality & Leisure Industry isn't synonymous with the 'Tourism Industry' since many of these jobs would exist without tourism, and it does not include any portion of the Transportation Industry nor the Retail Trade Industry which both receive direct revenue from Tourism activity. In order to include these, SCPRT historically has used Direct Impact Multipliers within an economic impact analysis or Tourism Satellite Account for comparison to other industries rather than using the Hospitality & Leisure Industry for this purpose.*

## **HOSPITALITY & LEISURE INDUSTRIES**

<http://www.bls.gov/oco/cg/cg1009.htm>

### Arts, Entertainment and Recreation Industry

- The industry is characterized by a large number of seasonal and part-time jobs and relatively young workers.
- About 40 percent of all workers have no formal education beyond high school.
- Rising incomes, more leisure time, and growing awareness of the health benefits of physical fitness will increase the demand for arts, entertainment, and recreation services.
- Earnings are relatively low.

### Food Services and Drinking Places Industry

- Food services and drinking places provided many young people with their first jobs—in 2004, more than 21 percent of workers in these establishments were aged 16 to 19, about 5 times the proportion for all industries.
- Cooks, waiters and waitresses, and combined food preparation and serving workers comprised more than half of industry employment.
- About 2 out of 5 employees worked part time, more than twice the proportion for all industries.
- Job opportunities will be plentiful because large numbers of young and part-time workers will leave their jobs in the industry, creating substantial replacement needs.

### Hotels and Other Accommodations Industry

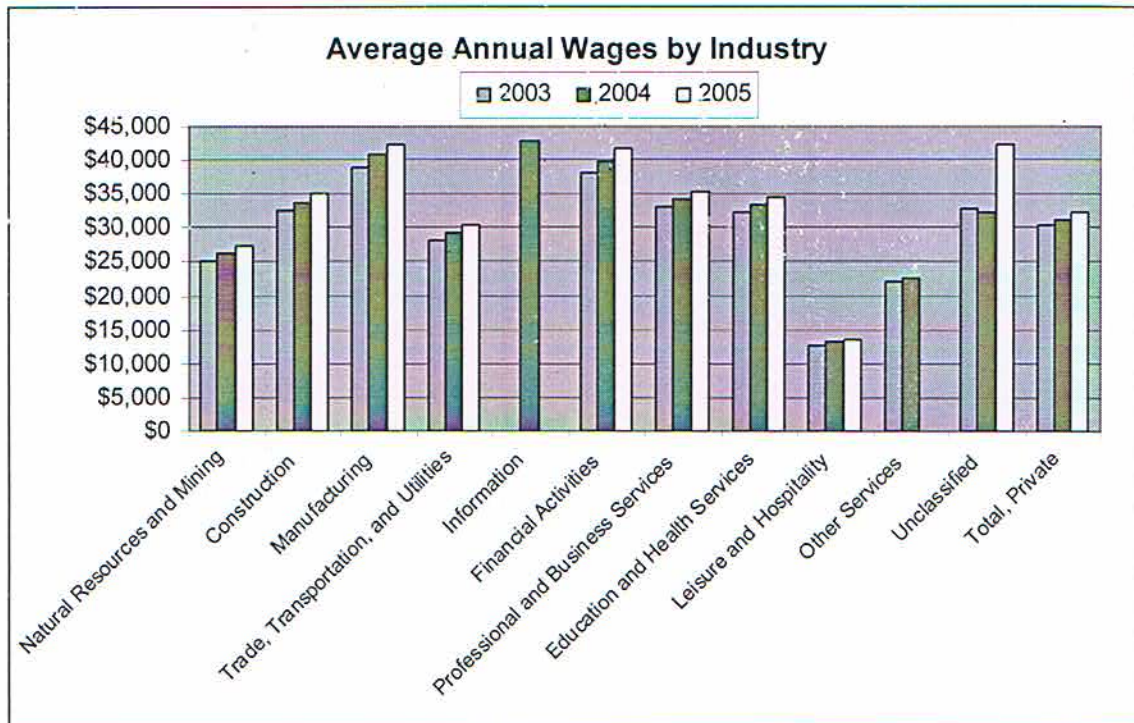
- Service occupations, by far the largest occupational group, account for 65 percent of the industry's employment.
- Hotels employ many young workers and others in part-time and seasonal jobs.
- Average earnings are lower than in most other industries.

In the following table, the SC Employment Security Commission reports the number of jobs and job growth from 2004 to 2005 for the Hospitality & Leisure Industry and other industries at a comparable level of classification. The Manufacturing Industry (262,000) had more jobs in 2005 than the Hospitality & Leisure Industry (201,400), but Manufacturing lost jobs (-6,000) while Hospitality & Leisure gained jobs (+1,500).

SOUTH CAROLINA NONFARM WAGE AND SALARY EMPLOYMENT				
	2005	2004	NET CHG	%CHG
<b>TOTAL</b>	1,860,400	1,833,000	27,400	1.5
<b>NATURAL RESOURCES AND MINING</b>	4,800	5,100	-300	-5.9
<b>CONSTRUCTION</b>	117,100	114,400	2,700	2.4
<b>MANUFACTURING</b>	262,000	268,000	-6,000	-2.2
<b>TRADE, TRANSPORTATION AND UTILITIES</b>	358,600	354,100	4,500	1.3
<b>INFORMATION</b>	27,000	26,800	200	0.7
<b>FINANCIAL ACTIVITIES</b>	97,900	93,900	4,000	4.3
<b>PROFESSIONAL AND BUSINESS SERVICES</b>	204,400	195,800	8,600	4.4
<b>EDUCATION AND HEALTH SERVICES</b>	185,400	181,300	4,100	2.3
<b>LEISURE AND HOSPITALITY</b>	201,400	199,900	1,500	0.8
<b>GOVERNMENT</b>	328,200	324,600	3,600	1.1

The average annual wage in the Hospitality & Leisure Industry is considerably lower (\$13,565) than the average manufacturing wage (\$42,239) and the average wage in private industry overall (\$32,420). Growth in average annual wages between 2003 and 2005 again show the Leisure and Hospitality Industry (+6.0%) below the average for manufacturing (+8.2%) and private industry overall (+7.2%).

INDUSTRY	2003	2004	2005	% Chg 2003 to 2005
Natural Resources and Mining	\$25,069	\$26,164	\$27,354	9.1%
Construction	\$32,486	\$33,588	\$35,075	8.0%
Manufacturing	\$39,027	\$40,779	\$42,239	8.2%
Trade, Transportation, and Utilities	\$28,257	\$29,381	\$30,247	7.0%
Information	na	\$42,744	na	
Financial Activities	\$38,107	\$39,765	\$41,757	9.6%
Professional and Business Services	\$33,191	\$34,180	\$35,470	6.9%
Education and Health Services	\$32,218	\$33,493	\$34,529	7.2%
Leisure and Hospitality	\$12,799	\$13,136	\$13,565	6.0%
Other Services	\$22,032	\$22,653	na	
Unclassified	\$32,974	\$32,220	\$42,163	27.9%
Total, Private	\$30,240	\$31,300	\$32,420	7.2%



Source: <http://www.sces.org/lmi/data/wages/cew/index.htm>

## Economic Impact

### How many jobs are generated for each million dollars of revenue?

The answer varies with each category of expenditure, e.g., lodging, food service, recreation, retail, transportation. It also varies with economic conditions, e.g., inflation, rising gas prices, increased technology, etc.

Source: TIA's TEIM	Visitor Expenditures (\$mil)			Direct Jobs ('000)			Jobs per Smillion		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Public Transportation	670.87	\$741.8	\$852.6	4.47	4.4	3.9	6.7	5.9	4.5
Auto Transportation	1,310.48	1,464.7	1,743.6	3.59	3.6	3.6	2.7	2.4	2.1
Lodging	1,600.93	1,721.2	1,860.0	21.14	22.0	21.9	13.2	12.8	11.8
Foodservice	2,247.43	2,377.4	2,534.0	52.40	54.0	55.2	23.3	22.7	21.8
Entertainment & Recreation	629.34	663.5	692.7	16.93	17.1	17.2	26.9	25.8	24.9
General Retail Trade	756.37	795.3	842.8	7.44	7.4	7.4	9.8	9.3	8.8
Travel Agencies				1.21	1.2	1.1			
Domestic Total	\$7,215.4	\$7,763.7	\$8,525.7	107.16	109.7	110.3	16.2	14.0	12.8

Upon request, TIA did a simple forecast for the job/spending ratio for SC. According to the forecasts, every one million travel dollars will create 13.5 jobs in 2006, 13.1 in 2007 and 12.8 in 2008. The forecasts were based on 1998-2005 data (direct spending and employment data). TIA also did a rough calculation of an indirect and induced employment multiplier based on 2003 data (latest BEA data TIA had for SC). **Total employment (including direct, indirect and induced) is roughly estimated by TIA at 222,507, which is comparable to the 216,100 jobs estimated with the SC Tourism Satellite Account.**

The far right column in the TIA table below reports an average annual wage of \$16,144 from Direct Jobs, as compared to \$13,565 for jobs in the Hospitality & Leisure Industry reported on the previous page.

Source: TIA's TEIM	Payroll Income (\$millions)			Direct Jobs ('000)			Average Annual Wages		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Public Transportation	\$172.3	\$174.4	\$155.6	4.47	4.4	3.9	\$38,579	\$39,642	\$40,262
Auto Transportation	64.1	65.3	68.4	3.59	3.6	3.6	\$17,850	\$18,349	\$18,991
Lodging	365.7	392.8	405.7	21.14	22.0	21.9	\$17,303	\$17,873	\$18,502
Foodservice	620.4	645.3	683.9	52.40	54.0	55.2	\$11,840	\$11,947	\$12,380
Entertainment & Recreation	282.3	292.0	305.1	16.93	17.1	17.2	\$16,677	\$17,061	\$17,720
General Retail Trade	130.1	131.0	135.1	7.44	7.4	7.4	\$17,492	\$17,683	\$18,257
Travel Agencies	27.5	27.5	27.4	1.21	1.2	1.1	\$22,834	\$22,834	\$25,411
Domestic Total	\$1,662.4	\$1,728.2	\$1,781.2	107.16	109.7	110.3	\$15,513	\$15,758	\$16,144

\*Public Transportation is primarily Air Transportation.

### How many jobs are generated for each percent of growth in visitor expenditures?

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**South Carolina Tourism Action Plan: Gross State Product and Employment – Economic Impact Measurement**

Author: Eamon Henry edited by Julie Flowers

The IMPLAN model calculates Employment impacts as full-time equivalent number of jobs.

**South Carolina 2003 Employment Impacts of Travel and Tourism Expenditures (number of full-time equivalent jobs)**

Travel and Tourism Expenditure group	Final Demand Expenditure stimulus (\$million) (1)	Direct+ Indirect Employ. Impact Response (2)	Induced Employ. Impact Response (3)	Total Impact (2) + (3) Response (4)
(A) Visitor & resident travel within South Carolina	9,425.1	145,940	27,857	173,797
(C) Add'l tourism-related economic activity within South Carolina	3,290.1	42,321	0	42,321
(A)+(C)Total expenditure within South Carolina	12,715.2	188,261	27,857	216,118
<b>Impact responses per \$million of stimuli:</b>				
(A)		15.48	2.96	18.44
(C)		12.86	0.0	12.86
(A)+(C)		14.81	2.19	17.00
<b>Impact responses as percentages of State total employment (2,243,459):</b>				
(A)		6.51	1.24	7.75
(C)		1.89	0.0	1.89
(A)+(C)		8.40	1.24	9.64

*(see www.sport.com/research/2nd report on Research Report page)*

In the first three rows, column (1) shows Final Demand stimuli (A) and (C), of combined value \$12,715.2m. Column (2) shows the Direct plus Indirect impacts, of combined Employment 188,261 jobs. Column (3) shows an Induced impact of 27,857 jobs, valid only for the Visitor Exports (\$6,791.4m) part of (A), as discussed in Appendix B below. Column (4) shows combined impacts along each row, namely 173,797 jobs for (A) and 42,321 for (C), thus making a total Employment impact of 216,118 jobs (total-time equivalent) generated by a total 2003 stimulus of \$12,715.2m occurring within South Carolina. As in the case of Gross State Product above it may be noted that the WTTC

Tourism Satellite Account treats the direct plus indirect impact 188,261 jobs as “Total”, in effect ignoring any induced impact.

In the next three rows, impacts are treated as average Employment per \$million unit of Final Demand stimuli, thus deriving Employment “multipliers”. For (A), the direct + indirect shows 15.48, and the total shows 18.44, the latter implying that on average every \$100m of type (A) expenditure generates Employment of 1,844 jobs. For (C), only the direct + indirect is valid, showing an Employment multiplier of 12.86 jobs per \$million Final Demand stimulus. The combined (A) + (C) effect shows a multiplier of 14.81 jobs as direct + indirect, and 17.00 jobs as total.

The Final three rows show the various Employment impacts as percentages of the 2003 State total Employment, taken as 2,243,459 jobs. The combined impacts (A) + (C) show a share of about 8.4 percent for direct + indirect, and about 9.6 percent for total impact (direct + indirect + induced). The higher percentage of state total employment (9.6) compared to that of Gross State Product (8.8) arises because of the relatively labor-intensive nature of the Travel and Tourism industries.